MECHANICAL ABBREVIATIONS INTERNATIONAL BUILDING CODE AIR CONDITIONING INDUSTRIAL COLD WATER AIR CHANGES PER HOUR INSIDE DIAMETER/DIMENSION ACOUSTICAL TILE CEILING INVERT ELEVATION ACCESS DOOR INTERNATIONAL MECHANICAL CODE ADDITIONAL ABOVE FINISHED FLOOR INCHES WATER GAUGE ABOVE FINISHED GRADE INTEGRATED PART LOAD VALUE AIR HANDLING UNIT KILOWATTS ALUMINUM LEAVING AIR TEMPERATURE AMPERAGE AMP/AMPS POUND/POUNDS ACCESS PANE LD'/LIN DIFF LINEAR' DIFFUSER ARCHITECT LF/LIN FT LINEAL FOOT/FEET BEADED COLLAR LIQUID PROPANE GAS BACKDRAFT DAMPER LEAVING BELOW FLOOR SOUND POWER BRAKE HORSEPOWER LOW WALL GRILLE BUILDING LOW WALL REGISTER BOTTOM OF DUCT LEAVING WATER TEMPERATURE BOTTOM OF PIPE MAXIMUM BOTTOM MAKE UP AIR UNIT BIRD SCREEN 1000 BRITISH THERMAL UNITS BRITISH THERMAL UNIT MINIMUM CIRCUIT AMPACITY BRITISH THERMAL UNITS PER HOUR MOTORIZED DAMPER CAPACITY MANUFACTURER CONTROLS CONTRACTOR MISCELLANEOUS CEILING DIFFUSER/CONDENSATE DRAIN MINIMUM/MINUTE MIN CONDENSER WATER RETURN MOUNT CONDENSER WATER SUPPLY MOUNTED MTD CUBIC FEET PER MINUTE MAKE-UP WATER CHILLED WATER RETURN NOT APPLICABLE CHILLED WATER SUPPLY NORMALLY CLOSED/NOISE CRITERIA CEILING NATURAL GAS COLUMN NOT IN CONTRACT CONCRETE CONC NORMALLY OPEN/NUMBER CONDENSATE COND NON-POTABLE WATER NPW CONNECT/CONNECTED/CONNECTION NON-RESIDENTIAL CONTINUÓUS/CONTINÚATION CONT OUTSIDE AIR CONTRACTOR CONTR OPPOSED BLADE COORDINATE OPPOSED BLADE DAMPER OBD COEFFICIENT OF PERFORMANCE OUTSIDE DIAMETER/DIMENSION OD COOLING TOWER CUBIC/CONDENSER UNIT POUNDS PER CUBIC FOOT PCF DOMESTIC COLD WATER/CONDENSER WATER PRESSURE DROP DUCTBOARD/DRY BULB PHASE DECIBEL POINT OF CONNECTION POC DIRECT DIGITAL CONTROL PRESSURE DEFLECTION POUNDS PER SQUARE INCH PSI DEGREE/ DEGREES POUNDS PER SQUARE INCH GAUGE MODULÁR DIFFUSER (GWB CEILING) QUANITY DIAMETER RETURN GRILLE/RELOCATED/RETURN DAMPER RETURN AIR DOWN DN ROUND MODULAR DIFFUSER ("T-BAR" CEILING) RD/RND REFERENCE DRAWING DWG REGISTER REG **EXHAUST EXH** REQUIRED EACH RESIDENTIAL **RESID** ENTERING AIR TEMPERATURE RELIEF EGGCRATE GRILLE/END CAP/ELEC CONTRACTOR RETURN GRILLE ENERGY EFFICIENT RATING REFRIGERANT LIQUID EXHAUST FAN REVOLUTIONS PER MINUTE EFFICIENCY REFRIGERANT SUCTION ELEVATION SUPPLY ELEC/ELECT ELECTRICAL/ELECTRIC SUPPLY AIR END PLUG SATURATION ENERGY MANAGEMENT CONTROL SYSTEM SMOKE DETECTOR **ENTERING** SLIP & DRIVE CONNECTION S/D **EQUIPMENT** SEASONAL ENERGY EFFICIENCY RATING SEER EXTERNAL STATIC PRESSURE SENSIBLE SENS ENTERING WATER TEMPERATURE EWT SUPPLY GRILLE EXISTING SOUND LINED **FAHRENHEIT** SPIRALMATE/SHEETMETAL SM FIRE ALARM CONTRACTOR **SPECIFICATION** FIRE DAMPER SCREENED OPENING FIRE DEPARTMENT CONNECTION SLAB ON GRADE FINISHED FLOOR STATIC PRESSURE FURNISHED AND INSTALLED BY CONTRACTOR SQUARE FEET SQ FT FURNISHED AND INSTALLED BY OWNER SIDE WALL REGISTER FULL LOAD AMPS STAINLESS STEEL FLEXIBLE STRUCTURAL FL00R TRANSFER FLAT ON BOTTOM FURNISHED BY OTHERS. INSTALLED BY CONTRACTOR TRANSFER AIR FOIC TEMPERATURE/TEMPORARY **TEMP** FLAT ON SIDE TO BE DETERMINED FLAT ON TOP TRANSFER GRILLE FIRE PROTECTION TOP OF CONCRETE/CURB FEET PER MINUTE FPM TOP OF DUCT TOD FIRE/SMOKE DAMPER FSD TOP OF STEEL/TOP OF SLAB **TOS** FOOT/FEET TOT FUTURE TOTAL STATIC PRESSURE **TSP** FACE VELOCITY THERMOSTAT **TSTAT** GRILLE TYPICAL TYP GAUGE/GALLON UNIT HEATER GALVANIZED GALV UNLESS NOTED OTHERWISE UNO GENERAL CONTRACTOR VOLT **GENERAL** VENT. AND INDOOR AIR QUALITY CODE GEN GALLONS PER MINUTE GPM VOLUME DAMPER GRILLE GR VELOCITY VEL GRILLE/REGISTER/DIFFUSER GRD **VERTICAL VERT** GYPSUM WALL BOARD **GWB** VARIABLE FREQUENCY DRIVE HEAD HD VOLUME HORIZONTAL WALL/WALLS, WRAPPED DUCT HORSEPOWER WET BULB HOUR WATER GAUGE HEATING SEASONAL PERFORMANCE FACTOR **HSPF** WITH HEIGHT WITHOUT HIGH WALL TRANSFER GRILLE WATTS PER SQUARE FOOT HOT WATER RETURN WASHINGTON STATE ENERGY CODE HOT WATER SUPPLY HWS HEAT EXCHANGER

MECI	HANICAL LEGEND
10X10 X 10X10 X	RECTANGULAR SUPPLY AIR DUCT — TURNING UP OR TOWARD
10X10 10X10	RECTANGULAR SUPPLY AIR DUCT — TURNING DOWN OR AWAY
10X10 7	RECTANGULAR EXHAUST OR RETURN AI DUCT — TURNING UP OR TOWARD
10X10 10X10	RECTANGULAR EXHAUST OR RETURN A DUCT — TURNING DOWN OR AWAY
5 10¢ (d) 10¢ (d)	ROUND DUCT — TURNING UP OR TOW
8 10¢ ⊘ • 10¢ ⊘	ROUND DUCT — TURNING DOWN OR A
√ 10¢ 🖺	FLATOVAL DUCT — TURNING UP OR T

FLATOVAL DUCT - TURNING DOWN OR AWAY እ 10ø 和8一 DUCT OVERLAP 10ø] 10ø 100 45° TAP f 10¢ VOLUME DAMPER

100 7 CHANGE OF ELEVATION RISE(R) DROP(D) **ELEERI** TRANSITION 1-Q-t TURNING VANES/SPLITTERS

DUCT MOUNTED SMOKE DETECTOR BACK DRAFT DAMPER FLEXIBLE DUCT **WW** AIR FLOW DIRECTION (FORCED AIR) AIR FLOW DIRECTION (DRAWN AIR) $- \rightarrow$

MOTOR OPERATED DAMPER FLEX CONNECTION

> FIRE DAMPER COMBINATION FIRE & SMOKE DAMPER

SMOKE DAMPER

SOUND TRAP ACCESS DOORS **(**2)

ACOUSTICALLY LINED DUCT (SOUND LINED) ₹1<u>6X16SL</u> DUCT BOARD 16X16DB **TANAMANAS** FABRIC DUCT

VAV BOX CEILING SUPPLY AIR DIFFUSER (SHOWN WITH REDIRECTED AIR CORE) CEILING RETURN, TRANSFER OR EXHAUST AIR GRILLE SLOTTED DIFFUSER (PLAN VIEW) REVISION CLOUD & TRIANGLE

ROUND DUCT SYMBOL FLATOVAL DUCT SYMBOL DEGREES SYMBOL POINT OF CONNECTION GRD TAG IDENTIFIER = TYPE-CFM THERMOSTAT/TEMPERATURE SENSOR HUMIDITY SENSOR SMOKE DETECTOR STATIC PRESSURE SENSOR EXISTING DUCTWORK

DEMO DUCTWORK WALL-MOUNTED GRILLE PIPE ELBOW UP PIPE ELBOW DN DIRECTION OF FLOW DIRECTION OF SLOPE DOWN PLUG OR CAP GAS PRESSURE REDUCING ASSEMBLY SOLENOID VALVE PUMP CHILLED WATER SUPPLY ---- CHWS CHILLED WATER RETURN REFRIGERANT LIQUID REFRIGERANT SUCTION NATURAL GAS

LIQUID PROPANE GAS

CDWR

₹—— COND ———5

CONDENSER WATER SUPPLY

CONDENSER WATER RETURN

HEATING WATER SUPPLY

HEATING WATER RETURN

CONDENSATE

MECHANICAL GENERAL NOTES

- ALL WORK SHALL CONFORM TO ALL APPLICABLE CODES AND REGULATIONS, INCLUDING, BUT NOT LIMITED TO THE 2009 IBC, 2009 WSEC, 2009 IMC
- 2. DIMENSIONS ARE TO FACE OF STUD, CONCRETE, OR MASONRY UNLESS NOTED OTHERWISE.
- 3. DO NOT SCALE DRAWINGS. DIMENSIONS GOVERN.
- 4. VERIFY ALL EXISTING CONDITIONS, DIMENSIONS, DETAILS, ETC. NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO PROCEEDING WITH THE WORK.
- 5. WHEN CONSTRUCTION DETAILS ARE NOT SHOWN OR NOTED FOR ANY PART OF THE WORK, DETAILS SHALL BE THE SAME AS FOR OTHER SIMILAR WORK. IF ADDITIONAL QUESTIONS REMAIN, CONTACT THE ENGINEER PRIOR TO PROCEEDING.
- 6. ALL STRUCTURAL OPENINGS AND PLATFORMS SHALL BE PROVIDED BY THE GENERAL CONTRACTOR UNLESS NOTED OTHERWISE.
- 7. DUCT SEALING AND CONSTRUCTION TO MEET SMACNA AND ENERGY CODE REQUIREMENTS. UNLESS OTHERWISE NOTED, LOW PRESSURE DUCTWORK (DOWNSTREAM OF VAV BOXES, CONSTANT VOLUME AC SYSTEMS, TOILET EXHAUSTS, ETC.) TO MEET 2" CONSTRUCTION STANDARDS WITH SEAL CLASS C. MEDIUM PRESSURE DUCTWORK (UPSTREAM OF VAV BOXES, HIGH VELOCITY EXHAUSTS, ETC.) TO MEET 4" CONSTRUCTION STANDARDS WITH SEAL CLASS A. DUCT RISERS IN SHAFTS WITH DAMPERED PENETRATIONS TO MEET 6" CONSTRUCTION STANDARDS WITH SEAL CLASS A.
- 8. ALL CEILING DIFFUSERS ARE 4-WAY THROW UNLESS NOTED OTHERWISE.
- 9. ALL DUCT DIMENSIONS ARE CLEAR INSIDE DIMENSIONS AFTER LINING HAS BEEN INSTALLED.
- 10. OUTSIDE AIR INTAKES ON ALL AIR HANDLING UNITS SHALL BE 10 FEET AWAY FROM ANY FUEL BURNING EQUIPMENT, AND 10 FEET AWAY FROM, OR 3 FEET BELOW ANY PLUMBING VENT OR EXHAUST OUTLET.
- 11. ALL AIR ECONOMIZERS SHALL BE CAPABLE OF THE FOLLOWING: -0% TO 100% OF THE DESIGN SUPPLY AIR
- -CONTROLLED BY A CONTROL SYSTEM DETERMINING IF THE OUTSIDE AIR CAN MEET PART OR ALL OF THE BUILDING COOLING LOADS. -INTEGRATED TO PROVIDE PARTIAL COOLING EVEN WHEN MECHANICAL COOLING IS REQUIRED
- 12. OUTSIDE AIR INTAKE, RELIEF, AND EXHAUST OPENINGS SHALL BE EQUIPPED WITH MOTORIZED (OR GRAVITY DAMPERS PER EXCEPTIONS IN 1412.4.1) WHICH CLOSE AUTOMATICALLY WHEN SYSTEM IS OFF OR UPON POWER FAILURE.
- 13. THE CONTROL SYSTEM SHALL BE 7-DAY PROGRAMMABLE, CAPABLE OF BEING SET FOR SEVEN (7) DIFFERENT DAY TYPES PER WEEK, AND CAPABLE OF A DEADBAND SETTING OF AT LEAST 5 DEGREES F (10°F FOR RESIDENTIAL), BETWEEN THE HEATING AND COOLING SETPOINTS. AHU CONTROL SYSTEM SHALL INCLUDE A MICROPROCESSOR AND BE CAPABLE OF RESETTING SUPPLY AIR TEMPERATURES BY REPRESENTATIVE BUILDING LOADS.
- 14. RECORD DRAWINGS OF THE ACTUAL INSTALLATION SHALL BE PROVIDED TO THE BUILDING OWNER WITHIN 90 DAYS OF THE DATE OF SYSTEM ACCEPTANCE PER THE WASHINGTON STATE ENERGY CODE. AN OPERATING MANUAL AND MAINTENANCE MANUAL SHALL BE PROVIDED TO THE BUILDING OWNER. ALL HVAC SYSTEMS SHALL BE BALANCED AND A WRITTEN BALANCING REPORT SHALL BE PROVIDED TO THE OWNER. HVAC CONTROL SYSTEMS SHALL BE TESTED TO ENSURE THAT THEY OPERATE IN ACCORDANCE WITH SPECIFICATIONS AND APPROVED PLANS. A PRELIMINARY COMMISSIONING REPORT OF TEST PROCEDURES AND RESULTS SHALL DEPORT OF THE DE BE PREPARED PRIOR TO ISSUANCE OF A FINAL CERTIFICATE OF OCCUPANCY. A COMPLETE FINAL COMMISSIONING REPORT OF TEST PROCEDURES AND RESULTS SHALL BE PROVIDED TO THE OWNER. COMMISSIONING, SYSTEM BALANCING, RECORD DRAWINGS AS REQUIRED PER THE WASHINGTON STATE ENERGY CODE.
- 5. MECHANICAL SYSTEMS SHALL COMPLY WITH SEISMIC RESTRAINT REQUIREMENTS OF THE BUILDING CODE, SMACNA AND ASCE 7.
 ALL LIFE SAFETY HAZARDOUS MATERIAL RELATED SYSTEMS SHALL BE DEEMED AN ID=1.5 FOR RESTRAINT METHODS OR AS NOTED ON THE DRAWINGS. REFER TO THE ABOVE NOTED CODES FOR INSTALLATION REQUIREMENTS AND EXCEPTIONS BASED ON SIZING, WEIGHTS AND MOUNTING HEIGHTS.
- 16. PROVIDE EARTHQUAKE RESTRAINTS FOR HVAC EQUIPMENT AS REQUIRED BY SMACNA SEISMIC RESTRAINT MANUAL, SEISMIC HAZARD B. WIRES FOR CEILING SYSTEM ETC. SHALL NOT BE HUNG OFF HVAC EQUIPMENT OR HVAC EQUIPMENT SUPPORTS.
- 17. PROVIDE FIRE AND COMBINATION FIRE/SMOKE DAMPERS WHERE SHOWN ON PLANS AND WHERE REQUIRED PER CODE.
- 18. ALL PIPING PENETRATIONS THROUGH RATED ASSEMBLIES SHALL BE SEALED WITH AN UL APPROVED FIRE CAULKING.
- 19. SMOKE DETECTORS PROVIDING AUTOMATIC SHUTDOWN SHALL BE PROVIDED FOR HVAC EQUIPMENT DELIVERING IN EXCESS OF 2000 CFM [INCLUDING MULTIPLE UNITS DUCTED INTO COMMON DISTRIBUTION OR RETURN, WITH AN AGGREGATE SUPPLY GREATER THAN 2000 CFM OR EACH STORY OF RETURN SYSTEMS OVER 15,000 CFM IN A MULTI-STORY INSTALLATION, PER CODE.

 SMOKE DETECTORS SHALL BE FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR UNLESS NOTED OTHERWISE. POWER-WIRING AND INTERLOCK TO FIRE ALARM SYSTEM BY ELECTRICAL CONTRACTOR AS APPLICABLE.
- 20. ACCESS PANELS SHALL BE PROVIDED BY MECHANICAL CONTRACTOR AND INSTALLED BY GENERAL CONTRACTOR.
- 21. ALL MOTOR STARTERS NOT SHOWN IN EQUIPMENT SCHEDULES SHALL BE FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR.
- 22. FOR ALL "SEALED AIR TIGHT" SHAFTS OR ROOMS, THE FOLLOWING SHALL OCCUR:

 -ALL VERTICAL JOINTS INSIDE THE SHAFT SHALL BE PROVIDED WITH A CONTINUOUS SEAL FOR THE LENGTH OF THE JOINT, INCLUDING THE SHAFT CORNERS (BY GC)
- -TOP AND BOTTOM WALL TRACKS SHOULD BE CAULKED ALONG THEIR ENTIRE LENGTH (BY GC) -ANY FLOOR DECKING PERPENDICULAR TO THE SHAFT SHALL BE CAULKED (BY GC). FILLING WITH ROCK WOOL IS NOT ACCEPTABLE -ANY PENETRATIONS OF THE SHAFT CONSTRUCTION (DUCTWORK, CONDUIT, PIPING, '...) SHALL BE SEALED ON BOTH SIDES
- -USE SECTION 905 OF THE 2009 IBC FOR MAXIMUM ALLOWABLE LEAKAGE AREA, FOLLOWING THE GUIDELINES FOR TIGHT STAIR -ALL DOORS SHALL BE PROVIDED WITH TIGHT FITTING GASKETS, AND OPEN AGAINST THE DIRECTION OF ROOM/SHAFT PRESSURE.
- 23. MAXIMUM LENGTH OF FLEXIBLE DUCT SHALL BE 12 FEET. REFER TO INSTALLATION DETAILS FOR SUPPORT REQUIREMENTS. FLEXIBLE DUCT FLAME SPREAD RATING SHALL BE < 25 AND SMOKE DEVELOPED RATING SHALL BE < 50. USE FLEXIDUCT MODEL G-KM FOR LOW AND MEDIUM PRESSURE APPLICATIONS OR APPROVED EQUAL.
- 24. LOCATION AND DETAILS OF EQUIPMENT, DUCT ROUTING, AND CONNECTIONS ARE APPROXIMATE. COORDINATE FINAL LOCATIONS WITH OTHER TRADES. INSTALL IN ACCORDANCE WITH APPROVED SUBMITTALS AND DETAIL DRAWINGS WHEN APPLICABLE.
- 25. FOR RESIDENTIAL INSULATION ON DUCTWORK AND PIPING SEE ENERGY CODE CHAPTER 5 AND TABLES 5-11 AND 5-12.

ZO. FOR RESIDENTIAL INCOME.		DE CUADTED 19	IS BY ELECTRICAL	
26. FLECTRICAL SUBMETERING DUC'	G OF SYSTEMS AS REQUIRED BY SEATTLE ENERGY CO. T INSULATION (R-VALUE)		LAST UPDATED:	: 07/21/10
DUCT TYPE	DUCT LOCATION	n-r insulation r-value	resid. Insulation R-value	REMARKS
SUPPLY, RETURN	NOT WITHIN CONDITIONED SPACE: ON EXTERIOR OF BUILDING, ON ROOF, IN ATTIC, IN ENCLOSED CEILING SPACE, IN WALLS, IN GARAGE, IN CRAWL SPACES	R-7	R-8	1,2,3
OUTSIDE AIR INTAKE	WITHIN CONDITIONED SPACE	VARIES	R-8	1,2,4,5
SUPPLY, RETURN, OUTSIDE AIR INTAKE	COLUMN COLUMN COLOR	R-5.3	R-5.0	1,2
SUPPLY WITH <55° OR	WITHIN CONDITIONED SPACE	R-3.3	NOT REQ.	1,2
1 DEFED TO ENERGY COL	DE SECTION 1414.2 FOR FURTHER REQUIREMENTS		01 11 1TED 0001 ED	

- . REFER TO ENERGY CODE SECTION 1414.2 FOR FURTHER REQUIREMENTS . REQUIREMENTS APPLY TO HEATED AND MECHANICALLY COOLED DUCT SYSTEMS AS NOTED. INSULATED COOLED DUCTS REQUIRED A VAPOR RETARDER (PERM < 0.5) AND SEALED JOINTS.
 WEATHERPROOF BARRIER REQUIRED AROUND DUCTWORK TO MAINTAIN WATER TIGHTNESS.
- 4. INSULATE OUTSIDE AIR DUCTS TO BUILDING ENVELOPE LEVEL PER ENERGY CODE CHAPTER 13 UNTIL CONNECTED TO EQUIPMENT SERVED OR TO THE CODE REQUIRED SHUTOFF DAMPER (THEN R-7 FOR REST OF
- 5. R-7 CAN BE USED IN LIEU OF BUILDING ENVELOPE INSULATION LEVEL IF: DEDICATED OUTSIDE AIR SYSTEM AND LESS THAN 2,800 CFM.

	1	PIPE I	NSULA	TION	(INCH			IPDATED: 01/	17/07
		INSULATION C				NOMINAL PIP	E DIAMETER	(IN)	
SERVICE	FLUIU	CONDUCTIVITY		RUN-OUTS	1 &	>1 TO	>2 TO	>4 TO	. 0
birth of the state	TEMP 'F	RANGE	RATING °F	UP TO 2	LESS	2	4	6	>6
HWS&R	141-200	0.25-0.29	125	0.5	1.5	1.5	1.5	1.5	1.5
HWS&R	105-140		100	0.5	1.0	1.0	1.0	1.5	1.5
CHWS&R	40-45	0.23-0.27	75	0.5	0.5	0.75	1.0	1.0	1.0
CHWS&R		0.23-0.27	75	1.0	1.0	1.5	1.5	1.5	1.5
CDWS&R	10_15	0.23 - 0.27	75	0.5	0.5 ULATION IS	0.75	1.0	1.5	1.0

DRAWING INDEX EQUIPMENT SCHEDULES - HVAC

APN NUMBER

172505-9058

LEGAL DESCRIPTION

POR GL 1 & 2 & BLKS F & G OF THE 2ND SUPL PLAT OF LK WN SH LDS

TGW 2ND CL SHLDS ADJ ALL LY WLY OF W MGN LK WN BLVD-LESS POR N

OF S LN OF N 1076.80 FT SD GL 1 & ITS WLY PROD- LESS POR THOF S

TH S 03-09-13 E ALG W MGN 75 FT TO TPOB OF DESC LN TH N

CONV BY REC 8907281497 AKA LOT B KK ALT LL #LL-91-50

REC 9104302101

|88-35-53 W TO INNER HARBOR LN & TERMINUS THIS LN - LESS POR

OF LN BEG AT NXN 1902.66 FT S & PLW N LN GL 1 & W MGN LK WN BLVI

5TH FLOOR PLAN - HVAC

Hermanson

Hermanson Company LLP 1221 2nd Avenue North Kent, Washington 98032 Tel: (206) 575-9700 Fax: (206) 575-9800

Contractor Reg #: HERMACL005BJ

www.hermanson.com

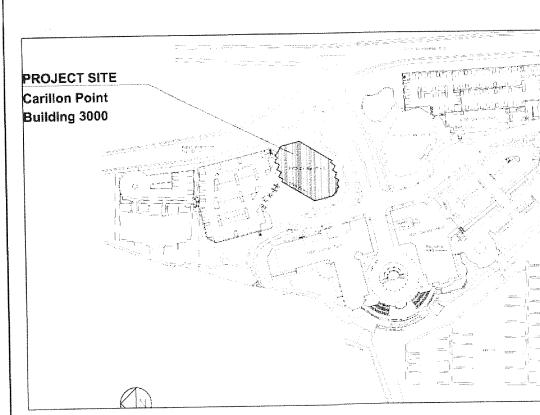
Xtreme Consulting 5th FIr Expension

Carillon Point Bldg. 3000 3500 Carillon Point KIRKLAND WA 98033

Revisions

Ne 63rd St He Eind St Houghton Me Both S Me 59th St he 58th St Le 58th St Ne 5 Ath St . Ne 55th 50 4 No 53id St Ne S2nd St Ne 4/th M Ne 45th St NO SERBENAVIED





Design	MG
Drawn	BB
Checked	MG
Scale	AS NOTED
Drawing Number	C-XXX-XXXX
Project Number	11-12-00572
Issue Date	5-04-2012

5-09-12 MECH PERMIT SET

Date By Description

Design Team

COVER PAGE - HVAC

SITE MAP NO SCALE

	VAV	BOX SCH	EDULE - ELE	CTRI	C										LAS	ST UPDATED:	5/7/12
											ELECTRIC	HEAT	TING COIL				
UNIT	-	AREA	BASIS OF	MAX	MIN	E.S.P.	F/	TOM NA	OR	EAT	LAT		NO. OF		INLET	WEIGHT	
TAG	LOCATION	SERVED	DESIGN	CFM	CFM	IN. W.G.	HP	VOLT	РН	DEG. F	DEG. F.	KW	STAGES	V/PH	SIZE	IN POUNDS	REMARKS
VAV-551	LEVEL 5	RM 554	NAILOR 35SEST-1	360	100	0.50	1/2	277	1	55.0	81.3	3.0	1	277/1	8	175	2,3,4,5,6
REMARKS							1		1	- 	1			I	·		

1 EXISTING

2 NEW VAV

3 PROVIDE SINGLE POINT POWER CONNECTION

4 PROVIDE ECM MOTOR

5 PROVIDE FN2 OPTION FOR ELECTRICAL LINE VOLTAGE ENCLOSURE

6 24V TRANSFORMER w/50 VA MIN RATING, UNIT CONTROLS AND, AUTO RESET 130 DEG. F. & THERMOSTAT BY CONTROLS CONTRACTOR

7 DEMAND CONTROL VENTILATION PROVIDED BY CONTROLS CONTRACTOR

loval in well thin seed Most Of SOCKH POPE SPICE 45 PP.	MODULAR DIFFUSER SCHEDULE LAST UPDATED: 05/07/1							05/07/12		
UNIT	BASIS OF	## WAR HE	NECK SIZE	MAX	CORE	FACE				
TAG	DESIGN	TYPE	IN DIA	CFM	SIZE	SIZE	NC	MOUNTING	MATERIAL	REMARKS
DT1	TITUS MCD	MODULAR	6	110	6 X 6	24 X 24		T-BAR	STEEL	1, 2, 3, 4
DT2	TITUS MCD	MODULAR	8	230	8 X 8	24 X 24		T-BAR	STEEL	1, 2, 3, 4
DT3	TITUS MCD	MODULAR	10	350	10 X 10	24 X 24		T-BAR	STEEL	1, 2, 3, 4
DT4	TITUS MCD	MODULAR	12	500	12 X 12	24 X 24		T-BAR	STEEL	1, 2, 3, 4
DT5	TITUS MCD	MODULAR	12	600	14 X 14	24 X 24		T-BAR	STEEL	1, 2, 3, 4
DT6	TITUS MCD	MODULAR	14	880	16 X 16	24 X 24		T-BAR	STEEL	1, 2, 3, 4
DT7	TITUS MCD	MODULAR	16	1,120	18 X 18	24 X 24		T-BAR	STEEL	1, 2, 3, 4
DG1	TITUS MCD	MODULAR	6	110	6 X 6	400 May 100		SURFACE	STEEL	1, 2, 3, 5
DG2	TITUS MCD	MODULAR	8	230	8 X 8	THE VAN GOT BAY		SURFACE	STEEL	1, 2, 3, 5
DG3	TITUS MCD	MODULAR	10	350	10 X 10	AND MARY FROM VIEW		SURFACE	STEEL	1, 2, 3, 5
DG4	TITUS MCD	MODULAR	12	500	12 X 12			SURFACE	STEEL	1, 2, 3, 5
DG5	TITUS MCD	MODULAR	12	600	14 X 14	App. Apr. Trap. Plan.		SURFACE	STEEL	1, 2, 3, 5
DG6	TITUS MCD	MODULAR	14	880	16 X 16	337 TOV TON TON		SURFACE	STEEL	1, 2, 3, 5
DG7	TITUS MCD	MODULAR	16	1,120	18 X 18	alar gab — dels -ala		SURFACE	STEEL	1, 2, 3, 5

1 RUN OUT SIZE SAME SIZE AS DIFFUSER NECK SIZE, U.N.O. ON DWGS

2 ALL DIFFUSERS TO HAVE SHEET METAL CAN PLENUM

3 STANDARD #26 WHITE FINISH

4 PROVIDE BORDER TYPE 3, LAY-IN TYPE

PROVIDE BORDER TYPE 1, SURFACE MOUNT TYPE

6 DIFFUSER CAN TO HAVE 1" SOUNDLINING WITH PERFORATED PLATE

	TRANSFER	R / RETU	JRN / EXI	HAUST A	IR GR	ILLE SCH	EDULE
namada aana dalaan aa maa aa ah maa aa ah maa aa ah maa dalah dalah dalah dalah dalah dalah dalah dalah dalah d						LAST UPDATED	5/7/2012
UNIT	BASIS OF	MAX	NECK SIZE		FACE		
TAG	DESIGN	CFM	IN DIA	MOUNTING	SIZE	MATERIAL	REMARKS
EC1	TITUS 50F-8	500	mair cost	T-BAR	24 x 12	ALUMINUM	2,9
EC2	TITUS 50F-8	1,000		T-BAR	24 x 24	ALUMINUM	2,9
EC3	TITUS 50F-8	2,000	paper more took state	T-BAR	24 x 48	ALUMINUM	2,9
R1	TITUS 50F-3	110	6	T-BAR	24 x 12	ALUMINUM	1, 5, 7/8, 9
R2	TITUS 50F-3	230	8	T-BAR	24 x 12	ALUMINUM	1, 5, 7/8, 9
R3	TITUS 50F-3	350	10	T-BAR	24 x 12	ALUMINUM	1, 5, 7/8, 9
R4	TITUS 50F-3	600	12	T-BAR	24 x 12	ALUMINUM	1, 5, 7/8, 9
R5	TITUS 50F-3	900	14	T-BAR	24 x 24	ALUMINUM	1, 5, 7/8, 9
R6	TITUS 50F-3	1,200	16	T-BAR	24 x 24	ALUMINUM	1, 5, 7/8, 9
R7	TITUS 50F-3	1,600	18	T-BAR	24 x 24	ALUMINUM	1, 5, 7/8, 9
R8	TITUS 50F-3	2,400	20	T-BAR	24 x 48	ALUMINUM	1, 5, 7/8, 9

RUNOUT SAME AS DWG NECK SIZE U.N.O. ON DWG

2 CORE ONLY - LAY-IN

3 SURFACE MOUNT FRAME

4 CHANNEL FRAME - LAY-IN 5 T-BAR LAY-IN

PROVIDE OPPOSED BLADE DAMPER (OBD)

PROVIDE DUCTBOARD PLENUM

8 PROVIDE SHEETMETAL PLENUM 9 STANDARD #26 WHITE FINISH

10 PROVIDE ALUMINUM GRILLES IN SHOWERS/HUMID AREAS

11 ALL NON-FERROUS MATERIALS IN MRI ROOMS

Hermanson

Hermanson Company LLP 1221 2nd Avenue North Kent, Washington 98032 Tel: (206) 575-9700

Fax: (206) 575-9800

www.hermanson.com Contractor Reg #: HERMACL005BJ

Xtreme Consulting 5th Flr Expension

Carillon Point Bldg. 3000 3500 Carillon Point KIRKLAND WA 98033

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		M-2-74//Accident		William Ad Walk Control of the Contr	SSS of the below to the second
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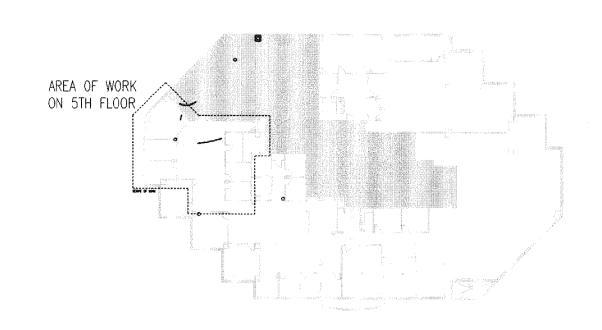
Revisions

Design Team Checked MG AS NOTED Drawing Number C-XXX-XXXX Project Number 11-12-00572 Issue Date 5-04-2012

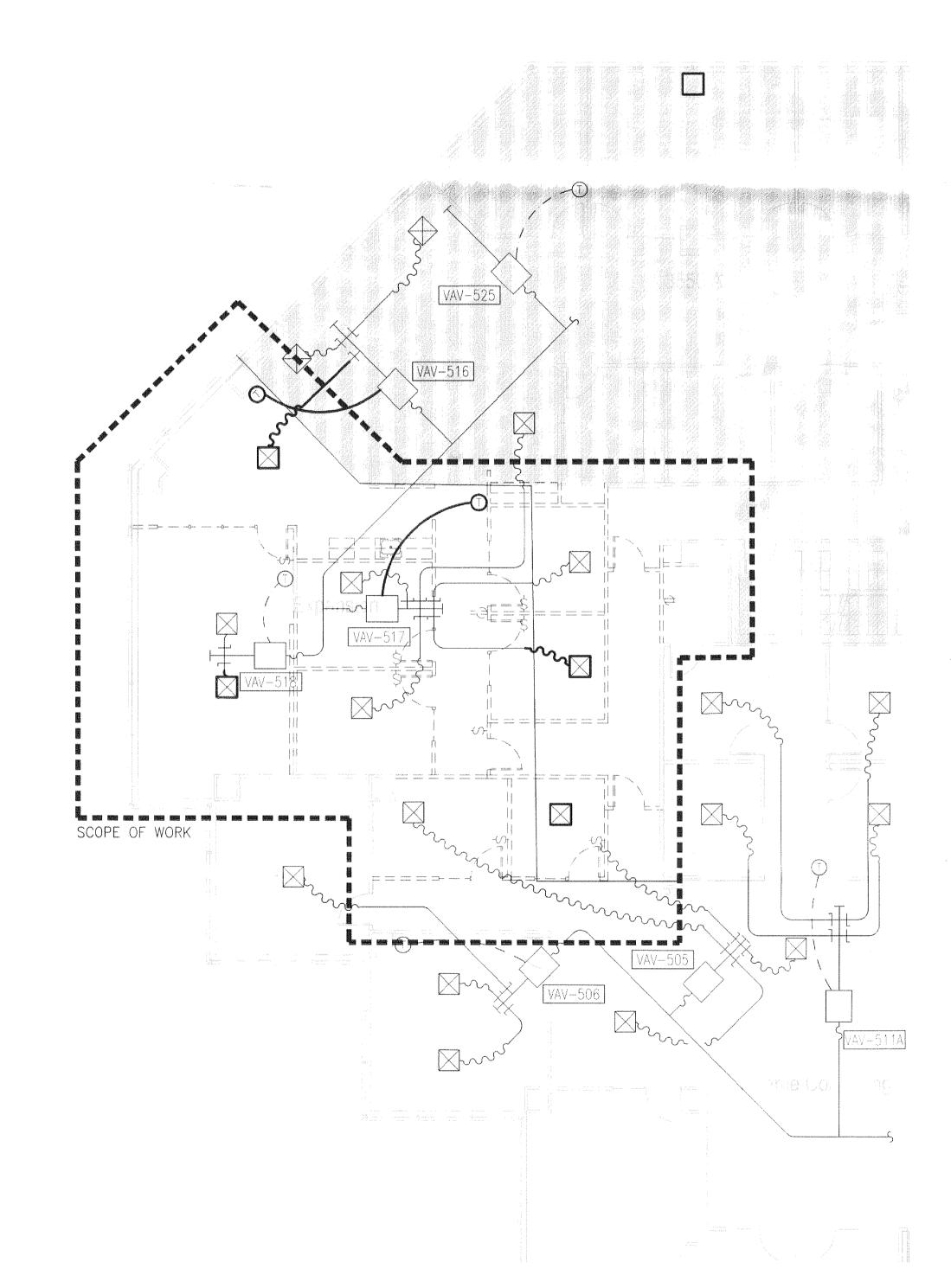
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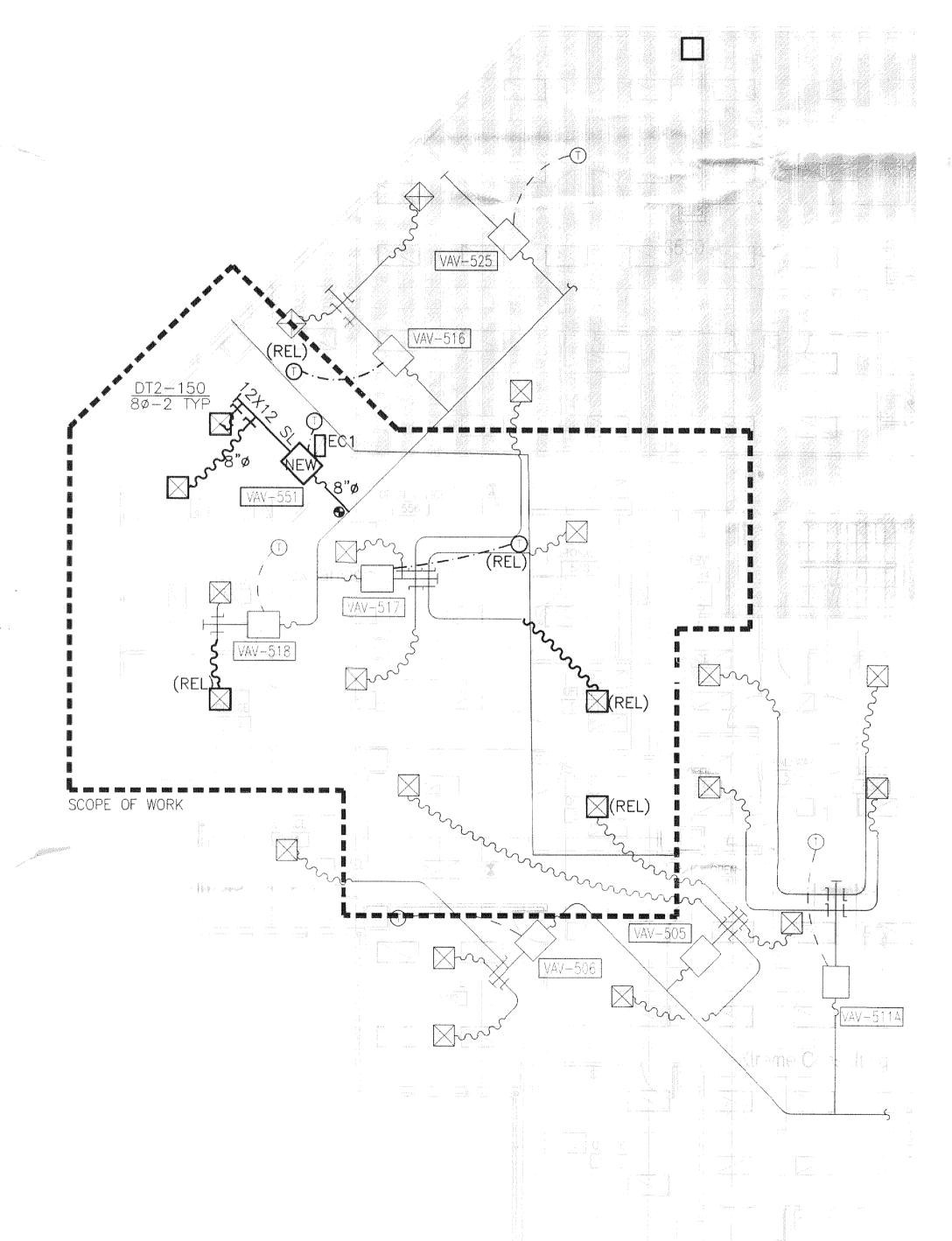
EQUIPMENT SCHEDULE - HVAC

M0.01



KEP PLAN
SCALE: NTS











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Xtreme Consulting 5th FIr Expension

Carillon Point Bldg. 3000 3500 Carillon Point KIRKLAND WA 98033

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Design	gn Team ^{MG}
Drawn	BB
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Scale	AS NOTED
Drawing Number	C-XXX-XXXX
Project Number	11-12-00572
Issue Date	5-04-2012

5TH FLOOR PLAN - HVAC

M2.05

CITY OF KIRKLAND
APPROVED FOR SUBMITTAL

Type of Review
Exp. FT Reg

Planning IC / 2/4 X

Public works WA / 5/9

NO REPLANTING REVIEW

NECESSARY JCC

NECESSARY JCC

MNR12-00883 4100 Carellon Pd. Way BLD 3000 Xtreme Cencultury 5/9/12